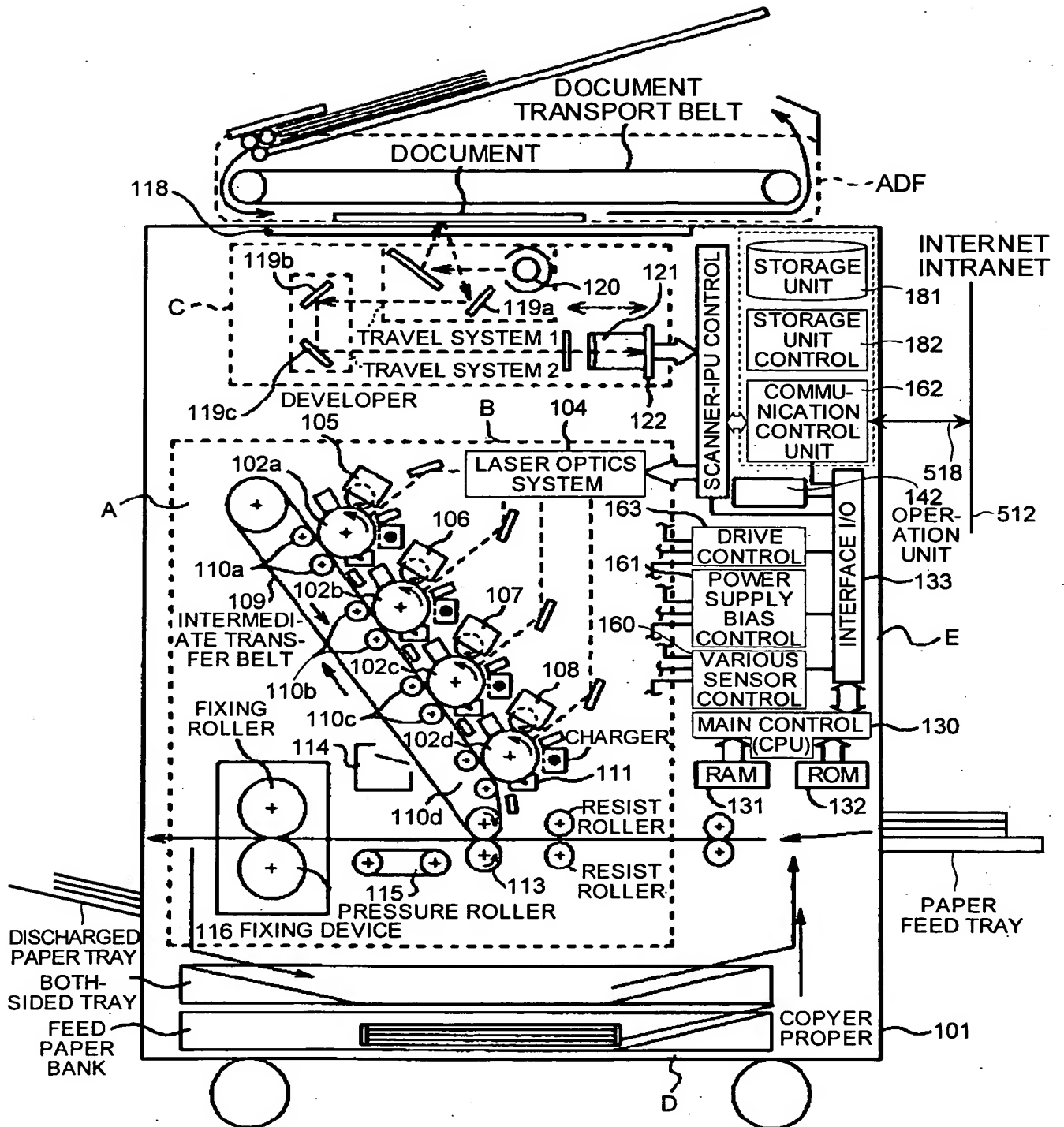


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FIG. 1



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FIG.2

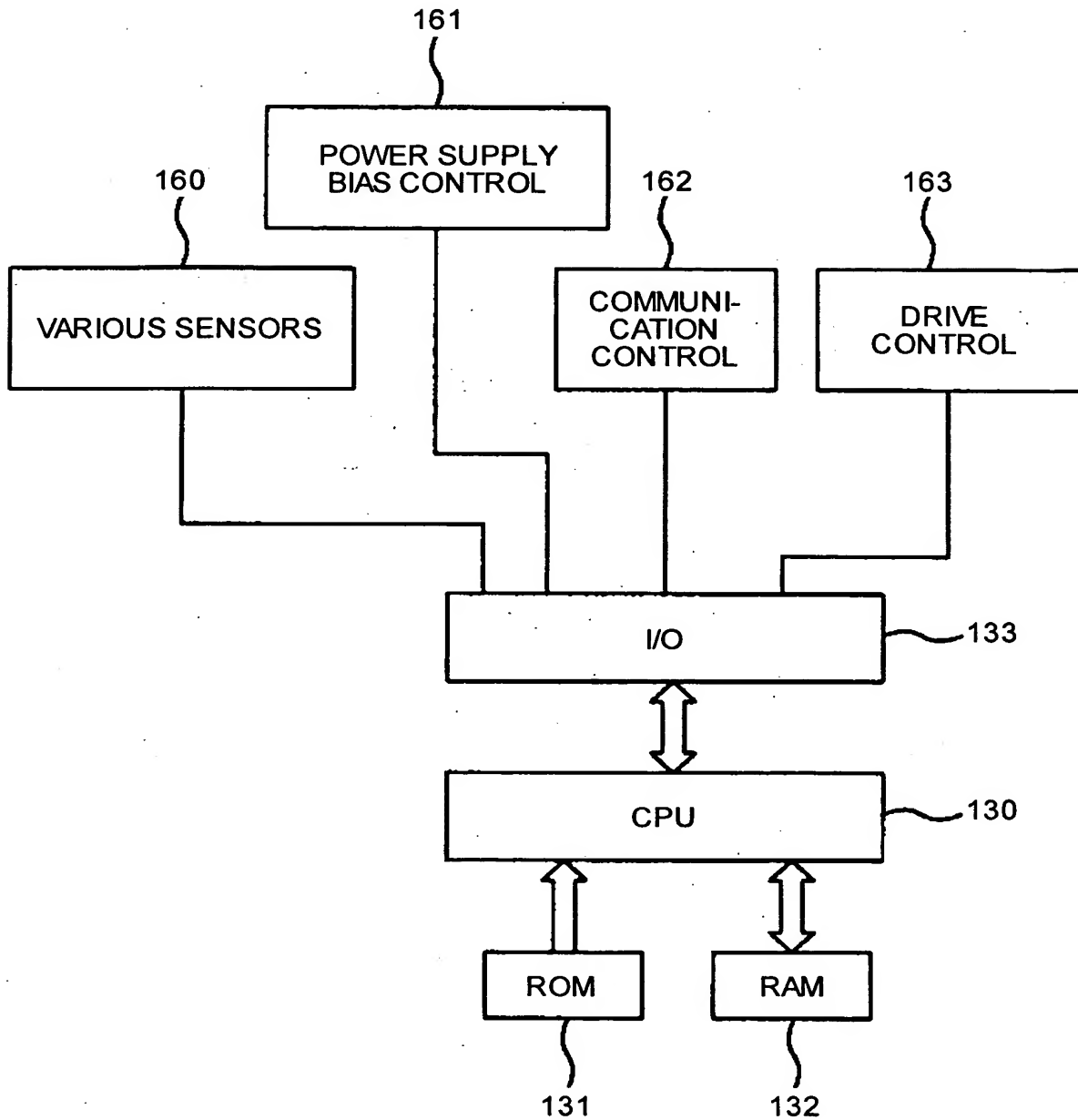
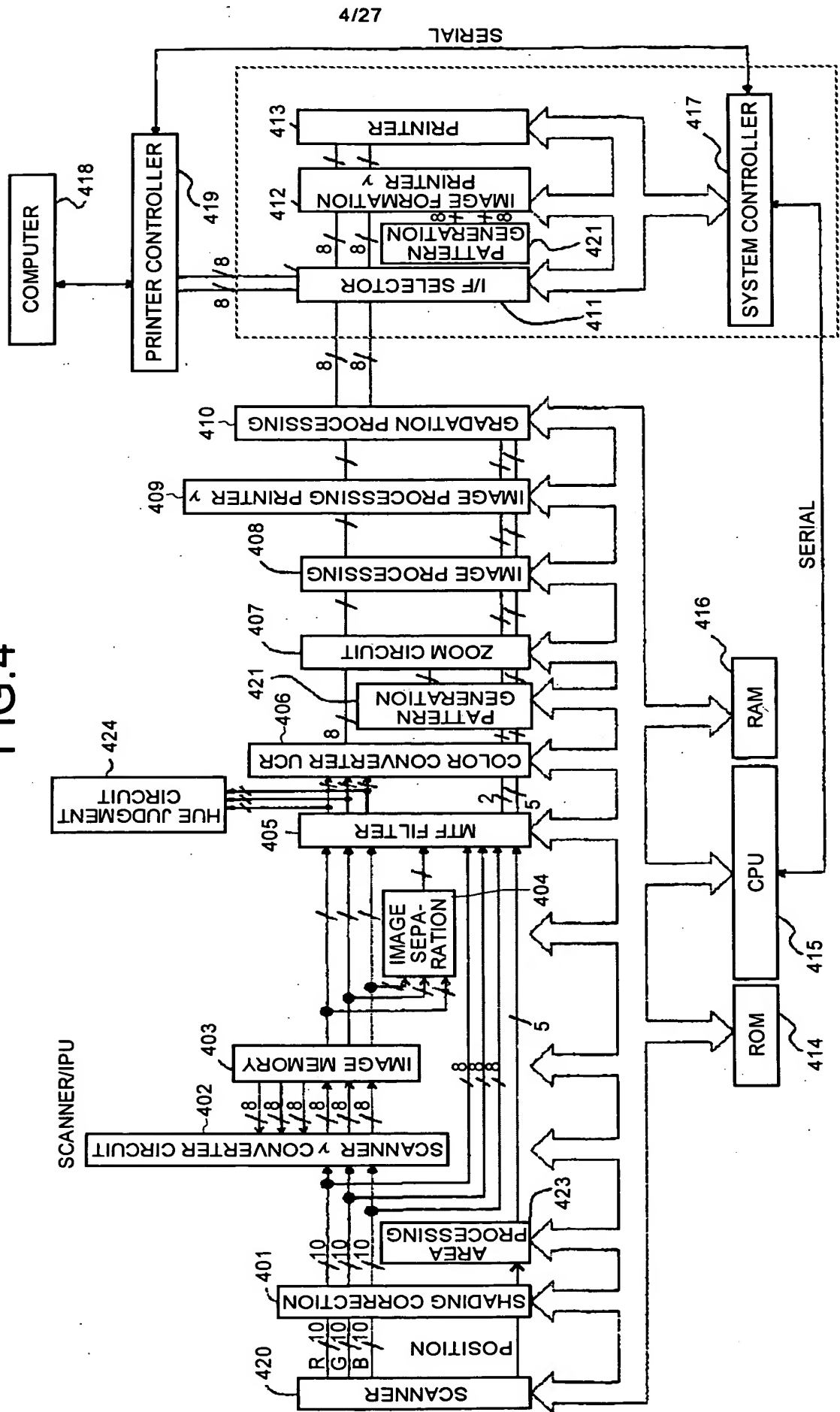
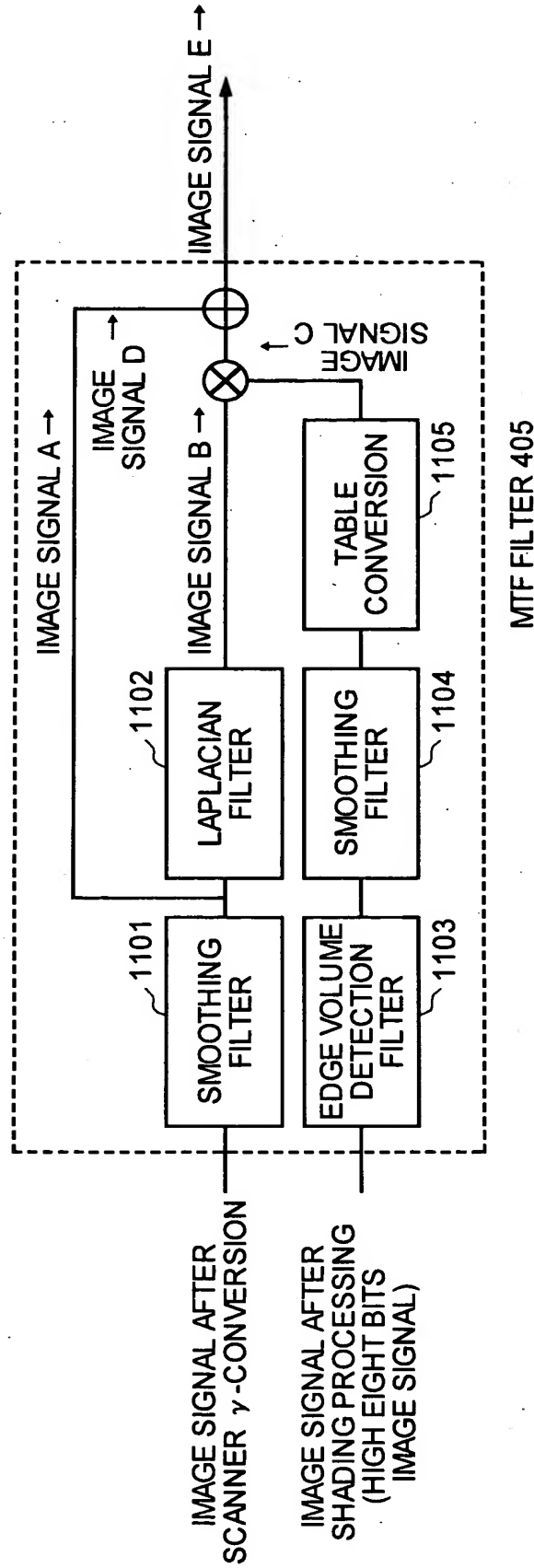


FIG. 4



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FIG.5



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FIG.6

(1/18) ×

| | | | | |
|---|---|---|---|---|
| 0 | 1 | 2 | 1 | 0 |
| 1 | 2 | 4 | 2 | 1 |
| 0 | 1 | 2 | 1 | 0 |

FIG.7

PLACIAN FILTER

| | | |
|----|----|----|
| 0 | -1 | 0 |
| -1 | 4 | -1 |
| 0 | -1 | 0 |

FIG.8

SLOW-SCAN DIRECTION EDGE DETECTION FILTER

| | | | | |
|----|----|----|----|----|
| 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 |
| -1 | -1 | -1 | -1 | -1 |
| -1 | -1 | -1 | -1 | -1 |

FIG.9

FAST-SCAN DIRECTION EDGE DETECTION FILTER

| | | | | |
|---|---|---|----|----|
| 1 | 1 | 0 | -1 | -1 |
| 1 | 1 | 0 | -1 | -1 |
| 1 | 1 | 0 | -1 | -1 |
| 1 | 1 | 0 | -1 | -1 |
| 1 | 1 | 0 | -1 | -1 |

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FIG.10

DIAGONAL DIRECTION DETECTION FILTER 1

| | | | | |
|----|----|----|----|---|
| 0 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 |
| -1 | 0 | 0 | 1 | 1 |
| -1 | -1 | -1 | 0 | 1 |
| -1 | -1 | -1 | -1 | 0 |

FIG.11

DIAGONAL DIRECTION DETECTION FILTER 2

| | | | | |
|---|----|----|----|----|
| 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 0 | -1 |
| 1 | 1 | 0 | 0 | -1 |
| 1 | 0 | -1 | -1 | -1 |
| 0 | -1 | -1 | -1 | -1 |

FIG.12

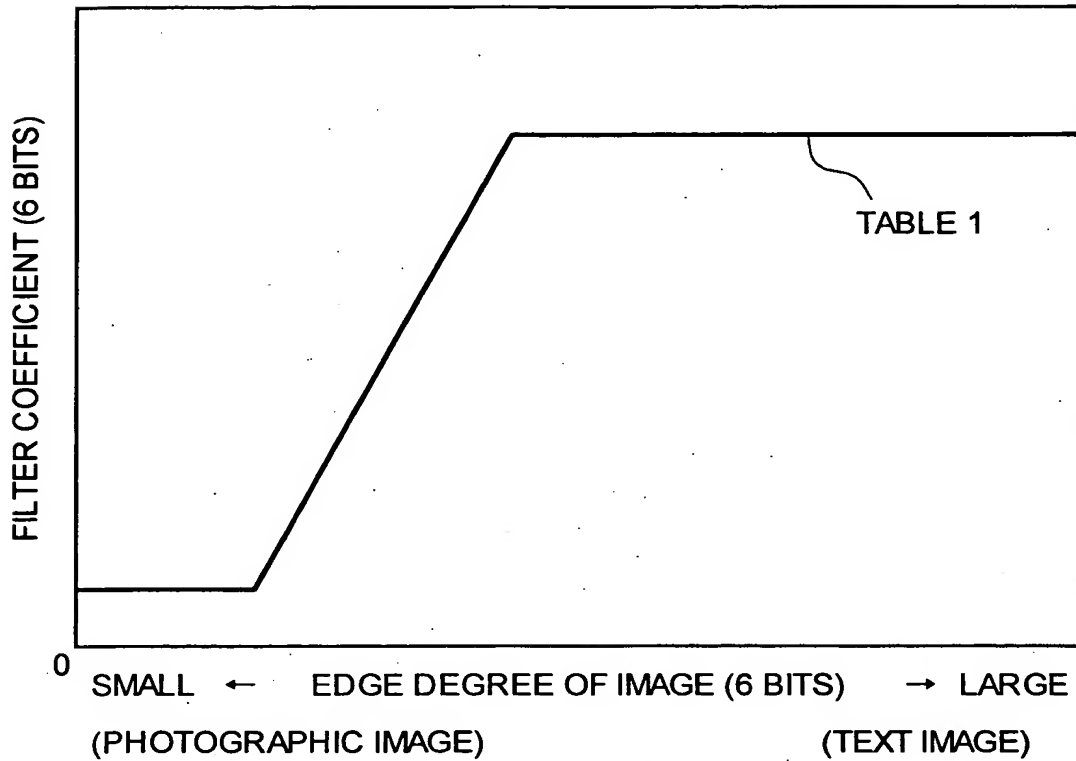
(1/4) ×

| | | |
|---|---|---|
| 1 | 2 | 1 |
|---|---|---|

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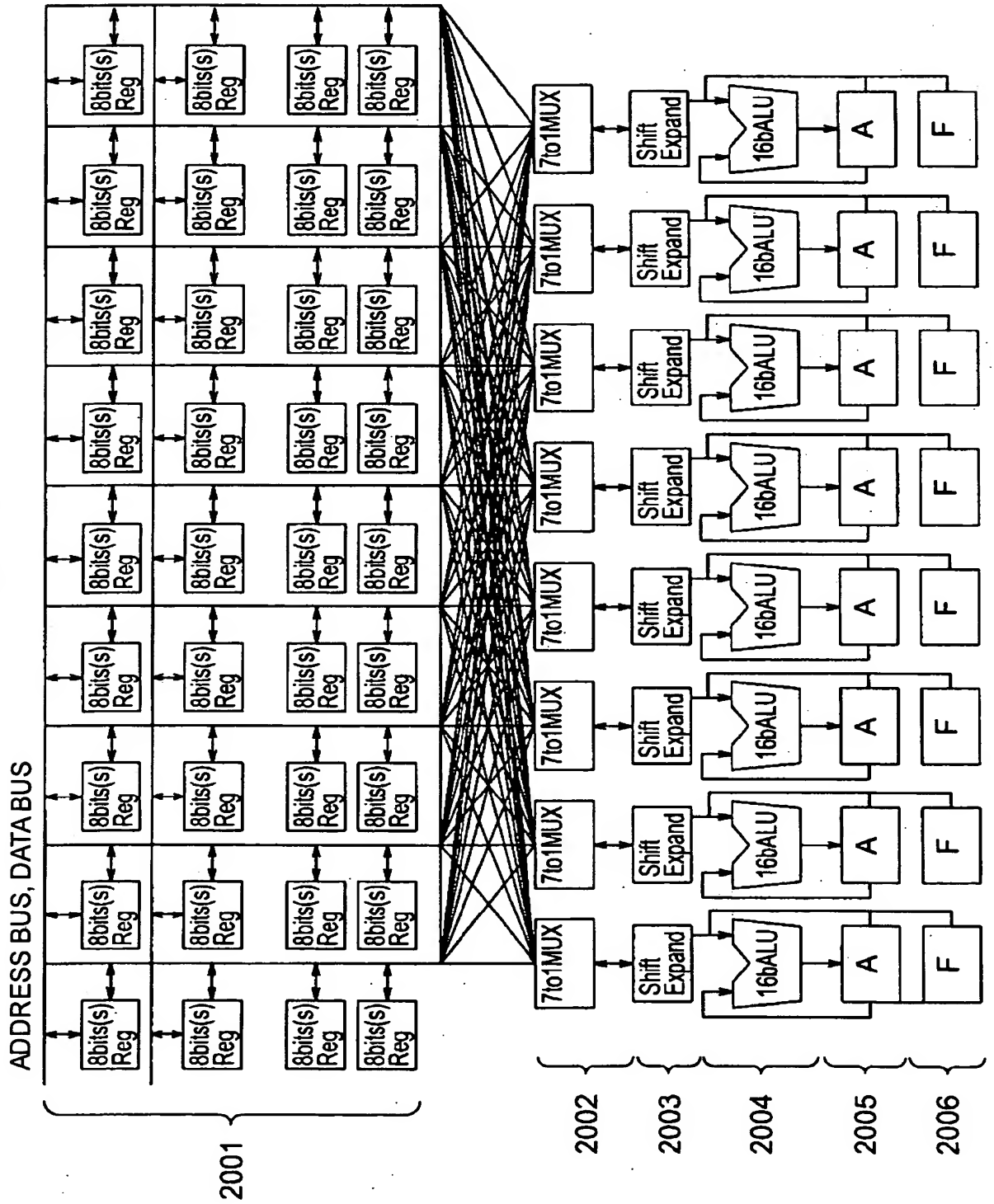
FIG.13

ADAPTIVE EDGE ENHANCEMENT TABLE



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FIG. 14



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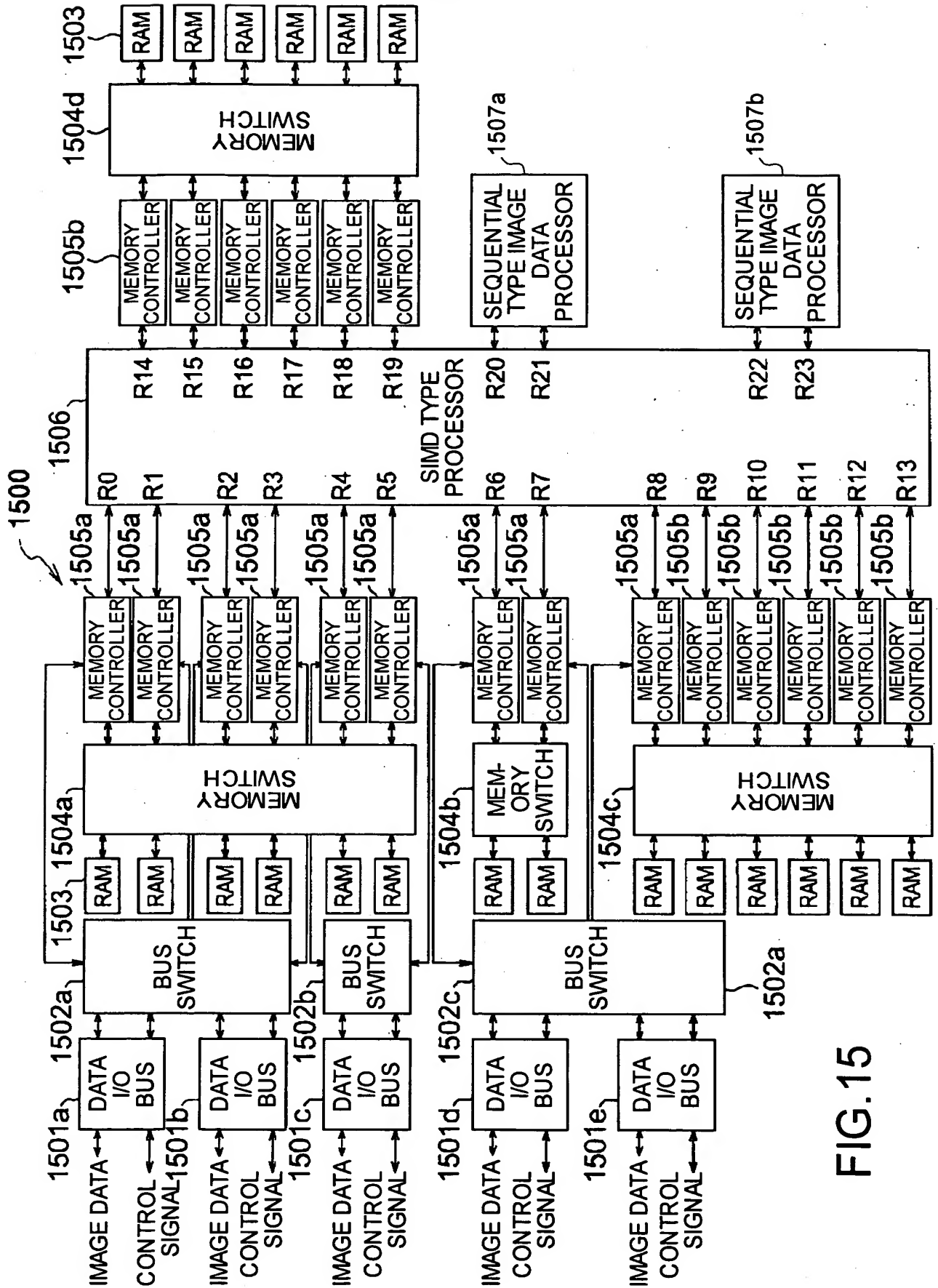
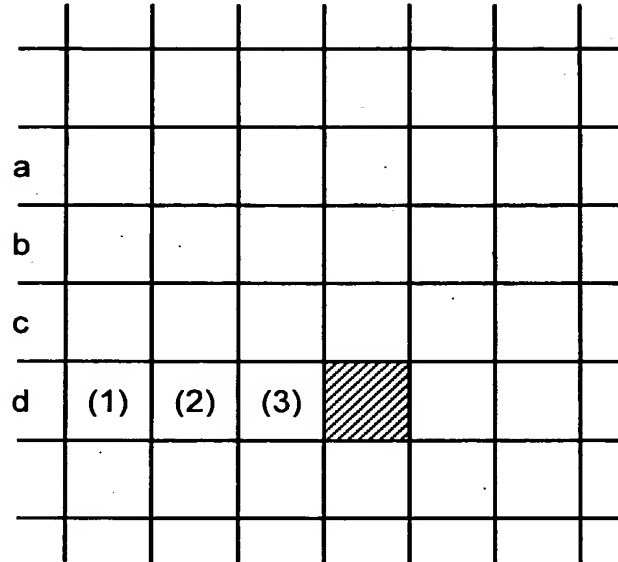


FIG.15

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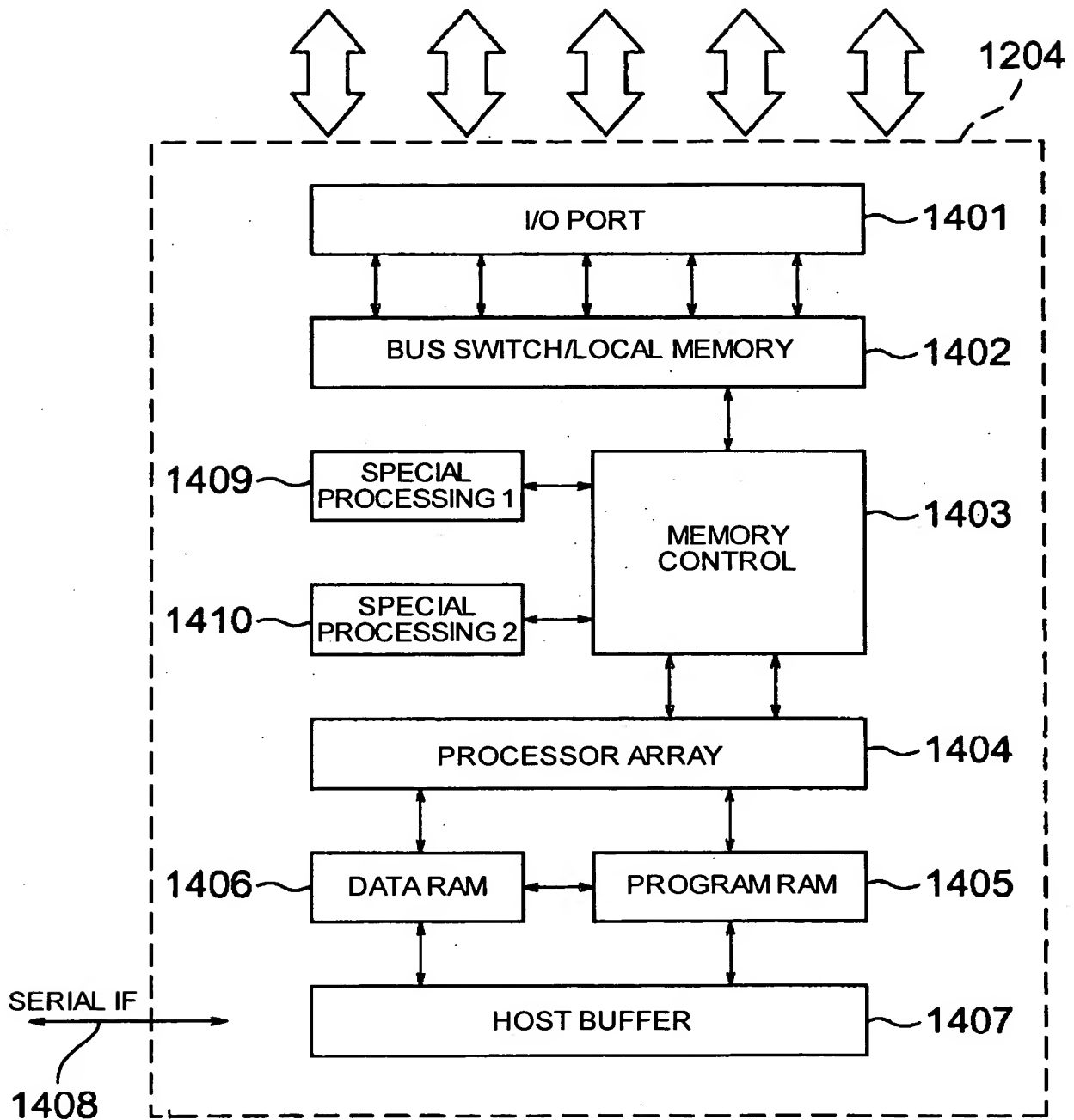
FIG. 16

POSITIONAL RELATION OF PIXELS



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FIG.17



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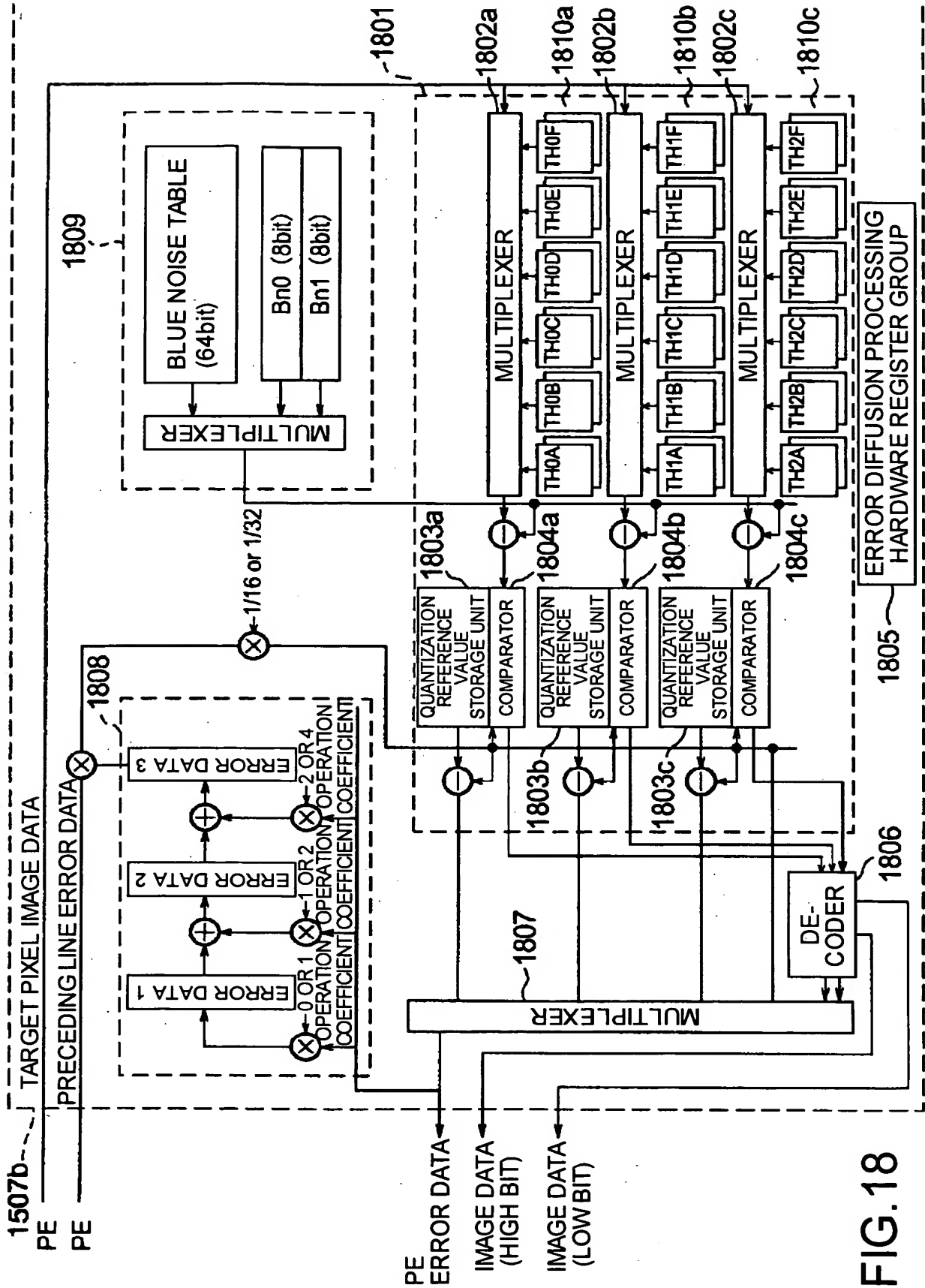


FIG. 18

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FIG. 19

CONFIGURATION DIAGRAM OF IIR TYPE FILTER SYSTEM

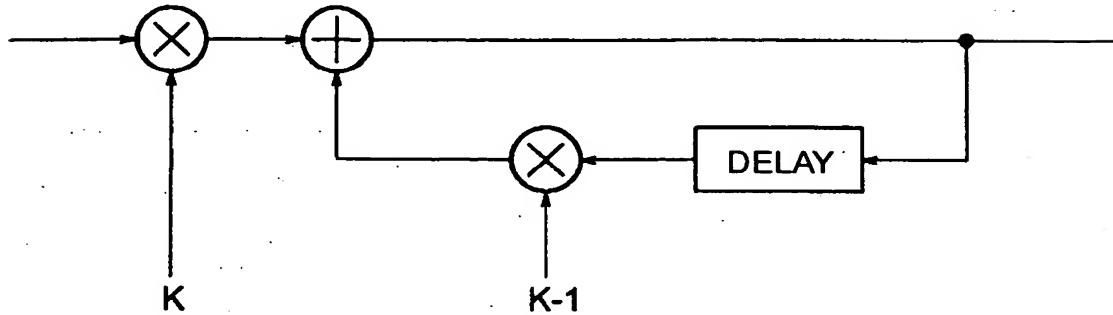
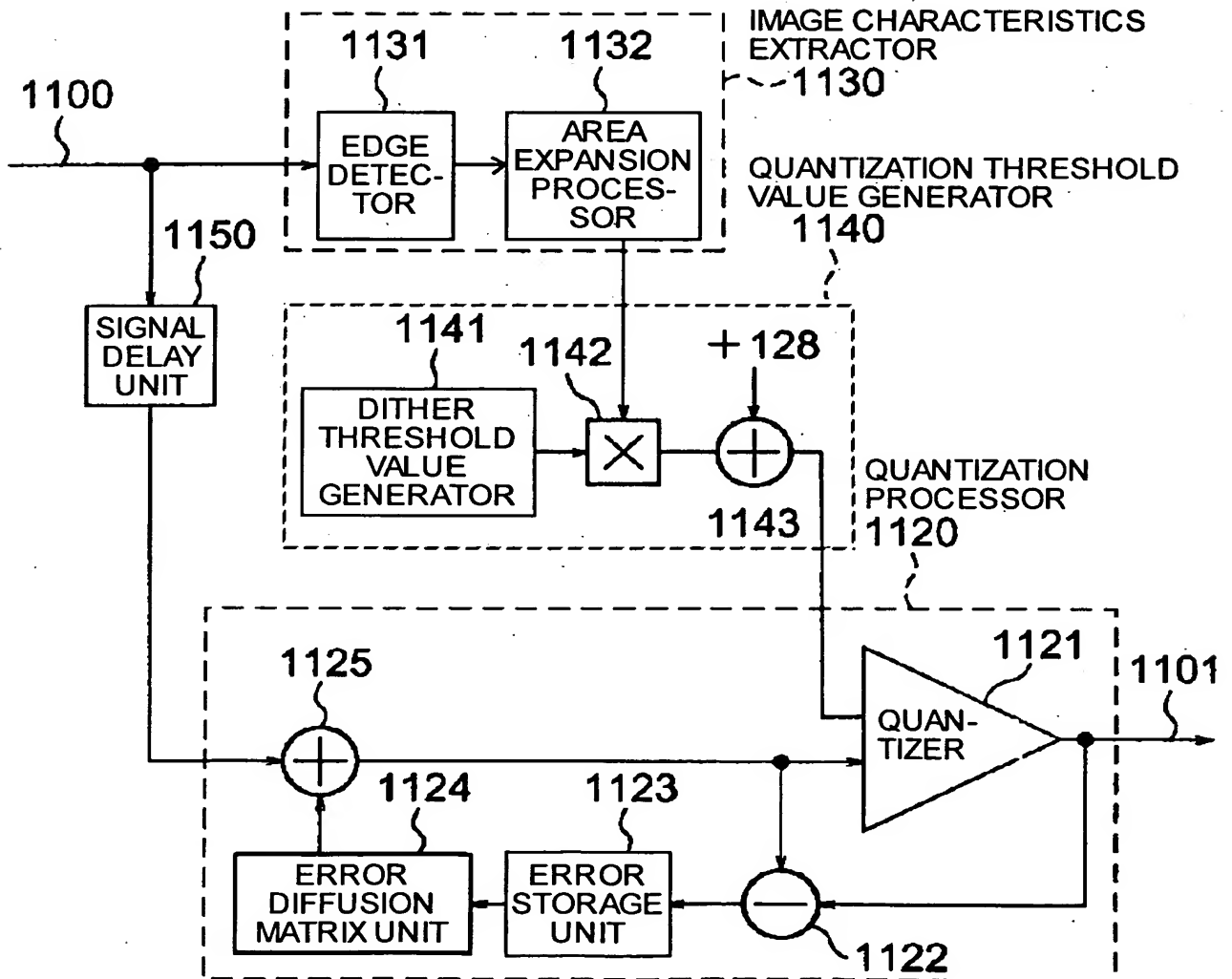
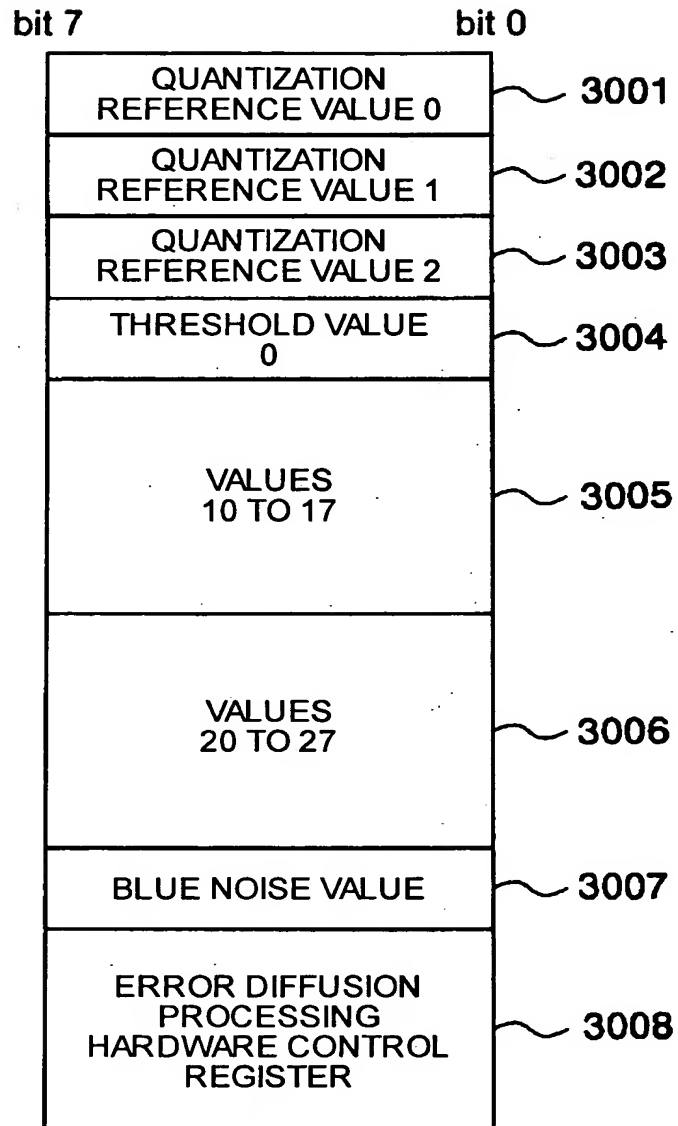


FIG. 20



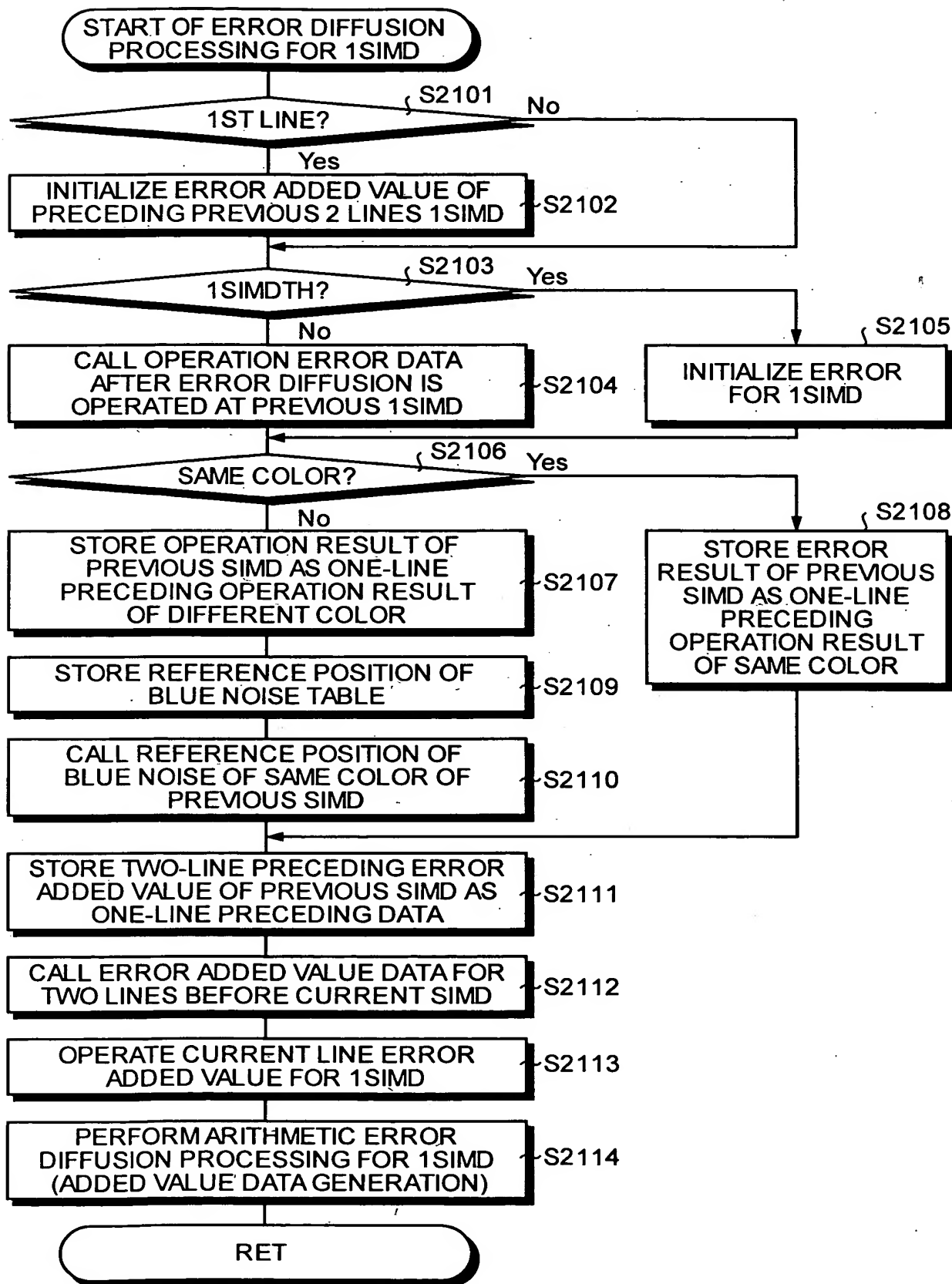
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FIG.21



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FIG.22



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FIG.23

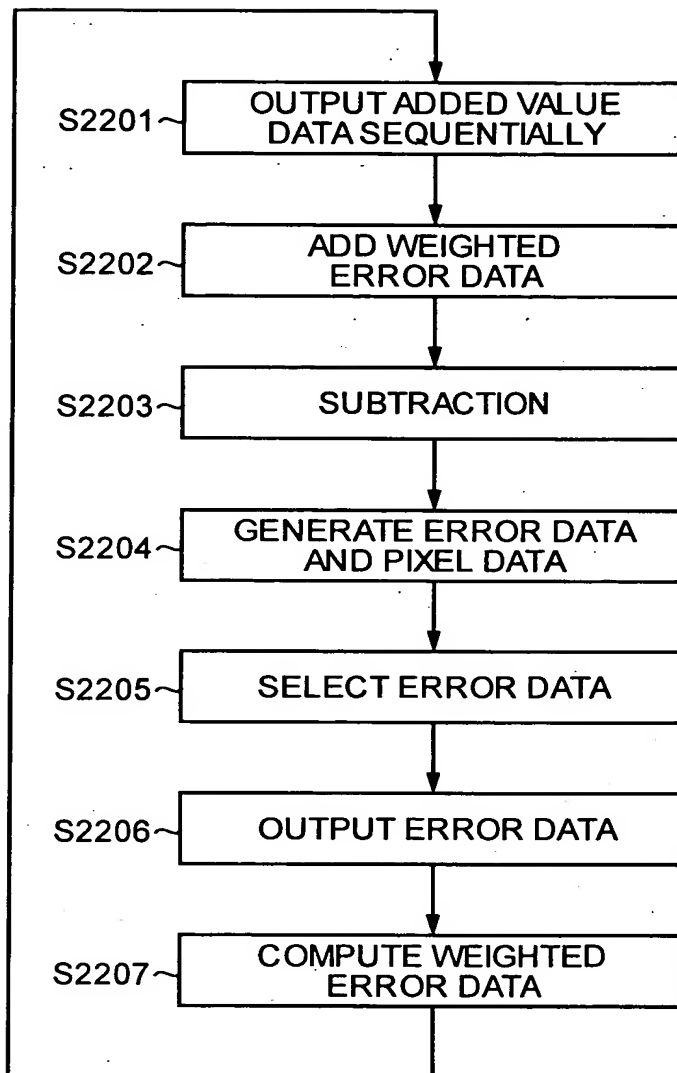
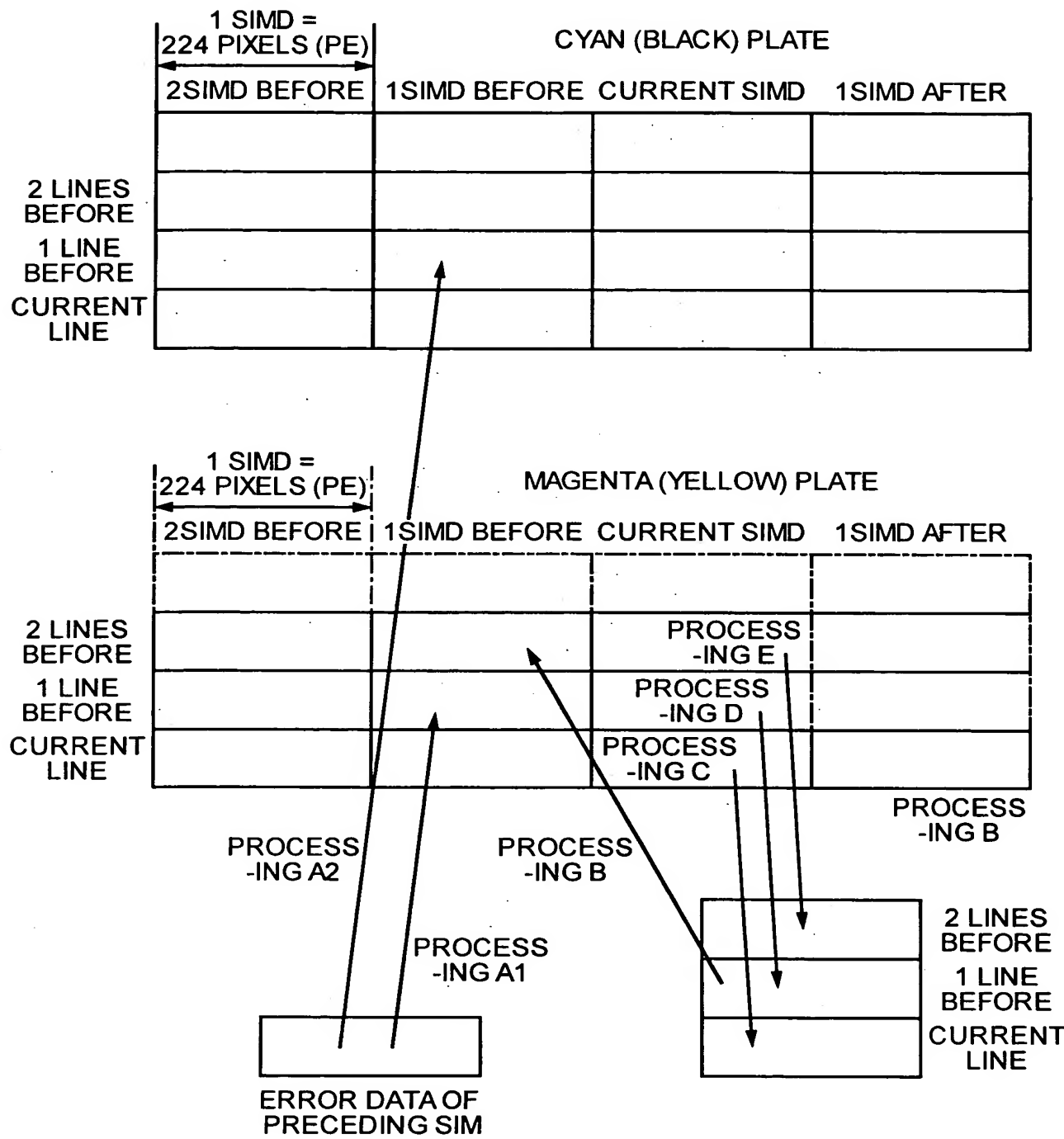


FIG.24



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FIG.25

| | | | | |
|---|---|---|---|---|
| a | b | c | d | e |
| f | g | h | i | j |
| k | l | * | | |

FIG.26

| | | | | |
|----|----|---|---|---|
| -1 | -1 | 0 | 1 | 1 |
| -1 | -1 | 0 | 1 | 1 |
| -1 | -1 | 0 | 1 | 1 |
| -1 | -1 | 0 | 1 | 1 |
| -1 | -1 | 0 | 1 | 1 |

| | | | | |
|----|----|----|----|----|
| -1 | -1 | -1 | -1 | -1 |
| -1 | -1 | -1 | -1 | -1 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 |

| | | | | |
|----|----|----|----|---|
| -1 | -1 | -1 | -1 | 0 |
| -1 | -1 | -1 | 0 | 1 |
| -1 | -1 | 0 | 1 | 1 |
| -1 | 0 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 1 |

| | | | | |
|----|----|----|----|---|
| -1 | -1 | -1 | -1 | 0 |
| -1 | -1 | -1 | 0 | 1 |
| -1 | -1 | 0 | 1 | 1 |
| -1 | 0 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 1 |

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FIG.27

| | | | |
|---|---|---|---|
| 4 | 6 | 3 | 2 |
| 5 | 6 | 1 | 1 |
| 6 | 3 | 2 | 4 |
| 6 | 1 | 1 | 5 |

→ FAST-SCAN DIRECTION



FAST-SCAN DIRECTION

FIG.28

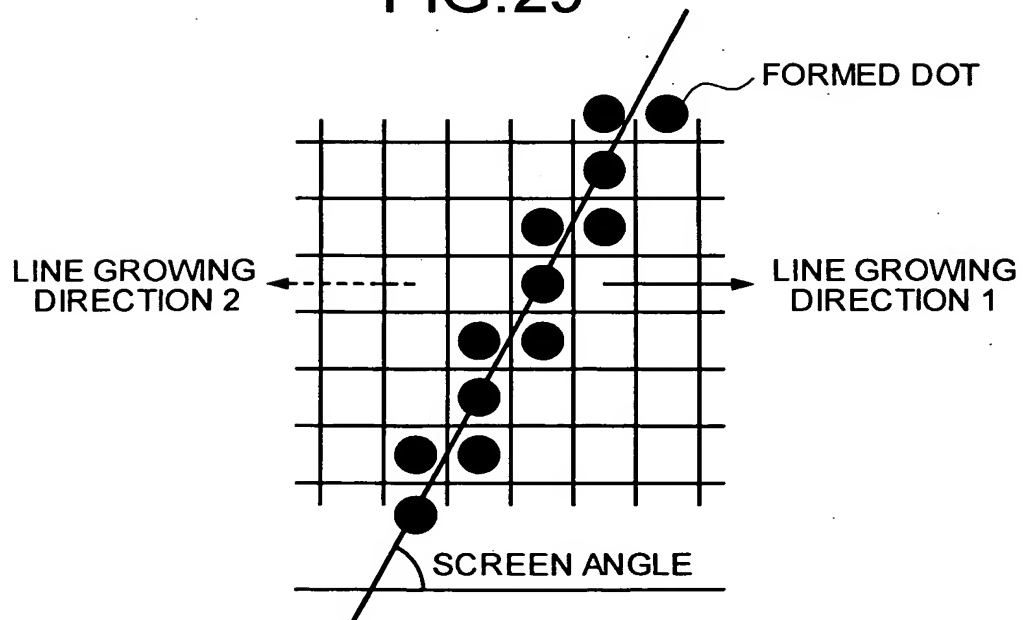
| | | | |
|---|---|---|---|
| 3 | 6 | 5 | 2 |
| 4 | 6 | 1 | 1 |
| 6 | 5 | 2 | 3 |
| 6 | 1 | 1 | 4 |

→ FAST-SCAN DIRECTION



FAST-SCAN DIRECTION

FIG.29



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FIG.30

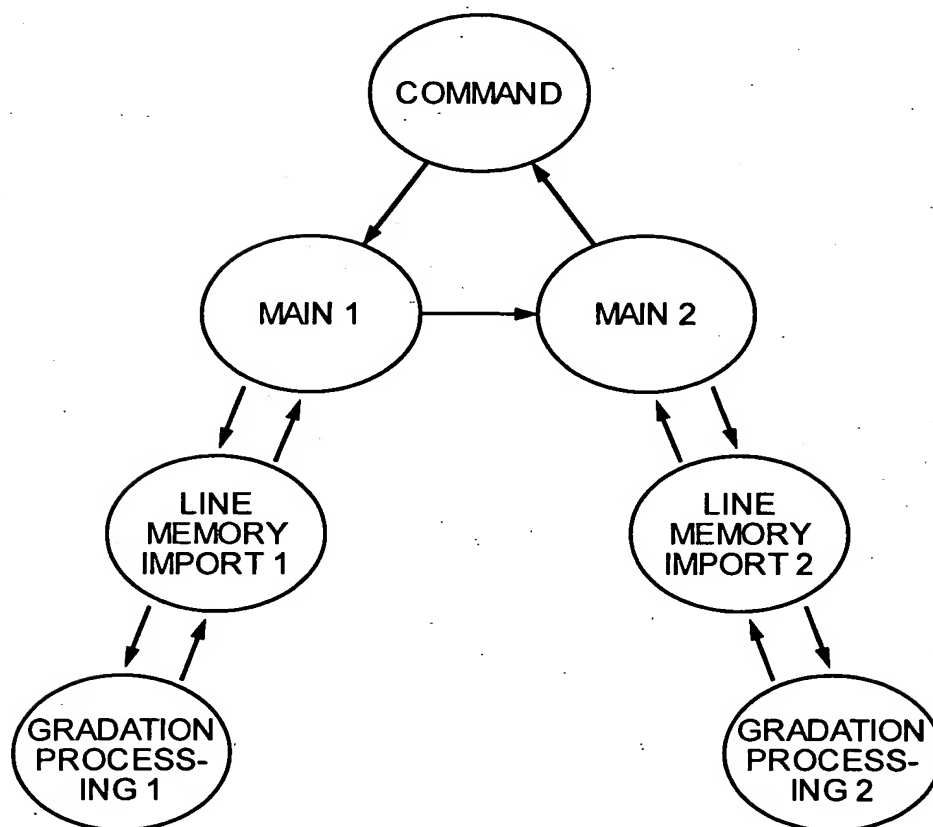
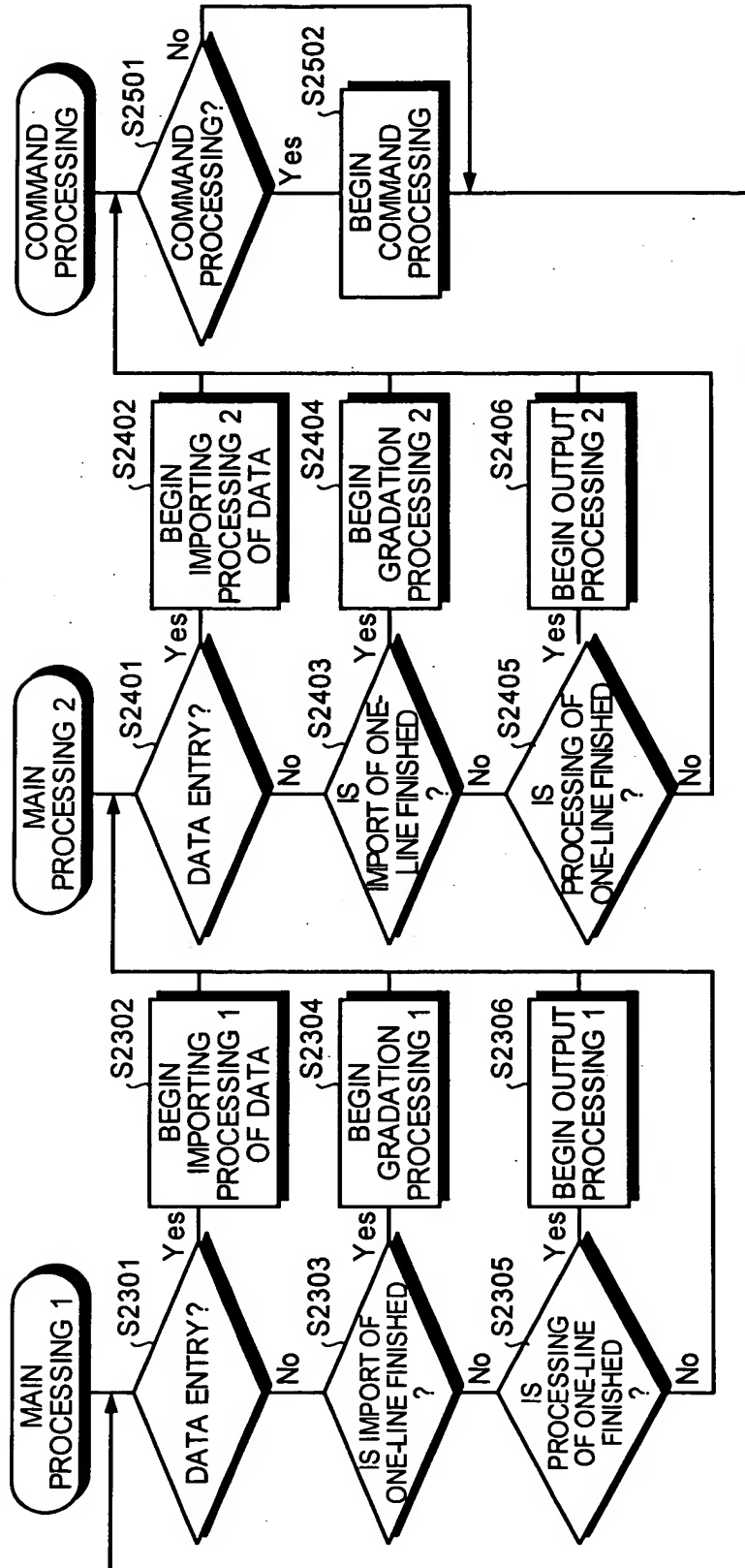
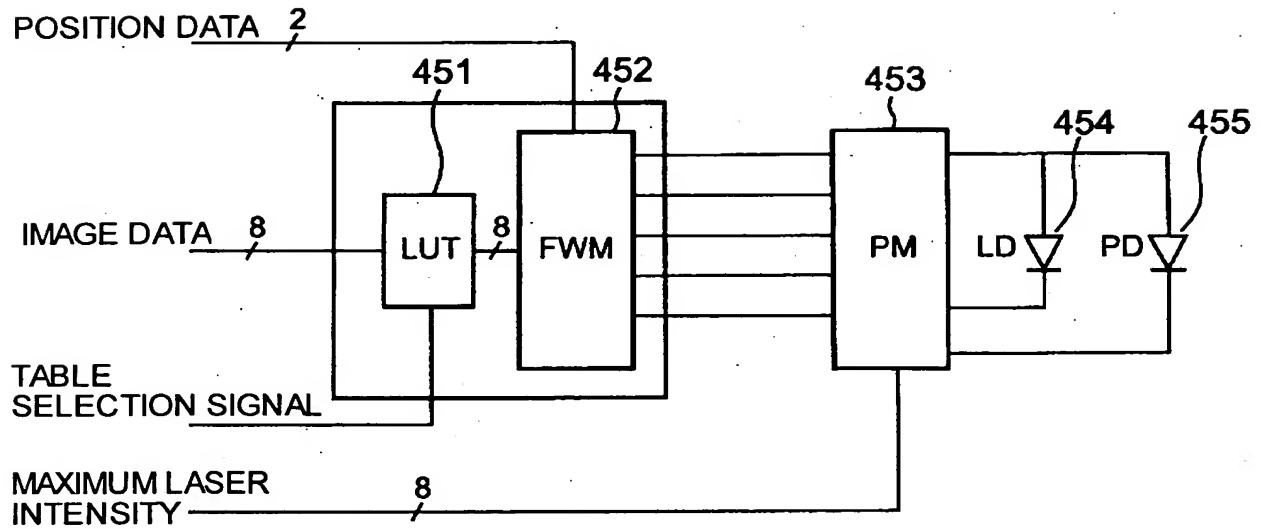


FIG.31



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FIG.33



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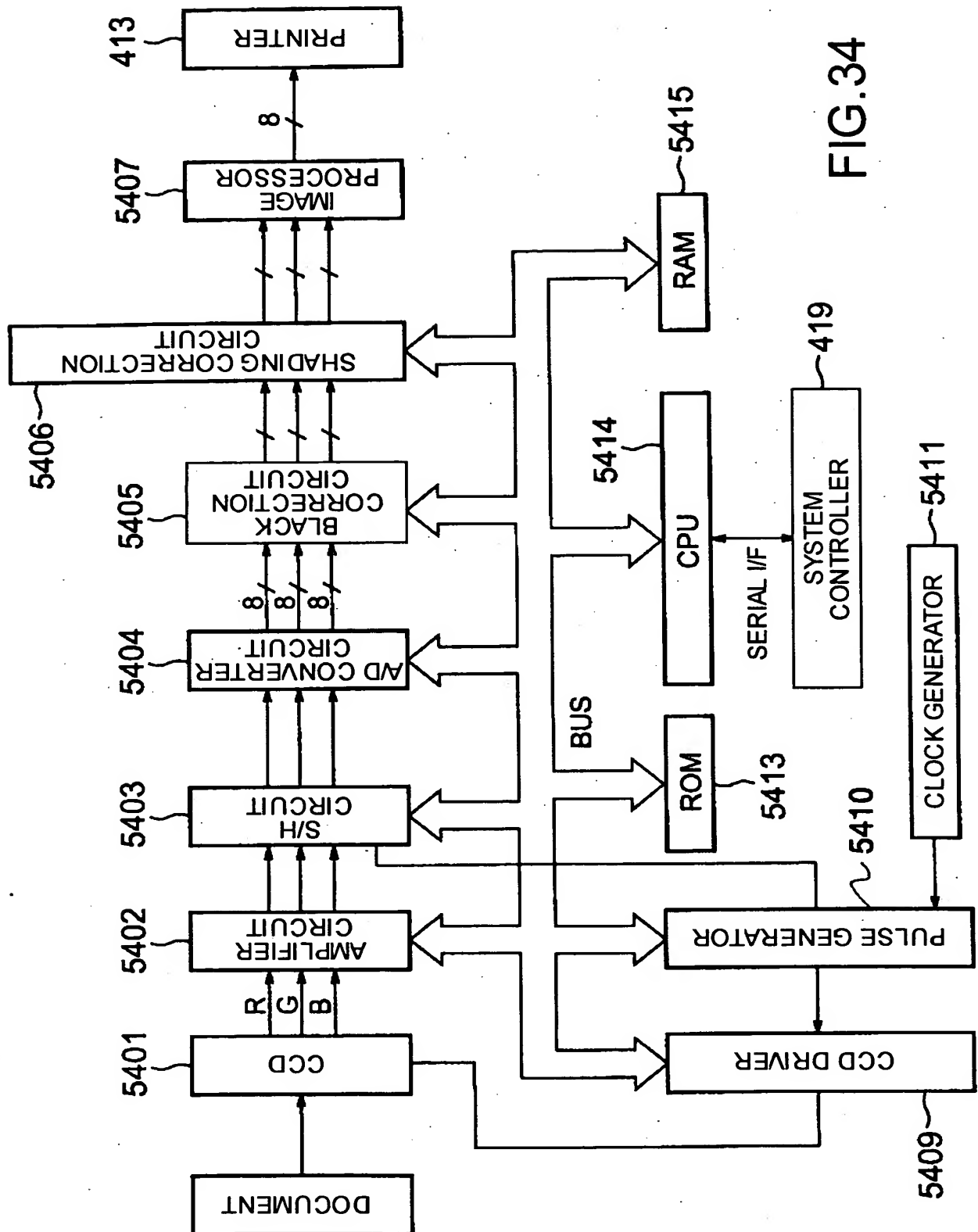
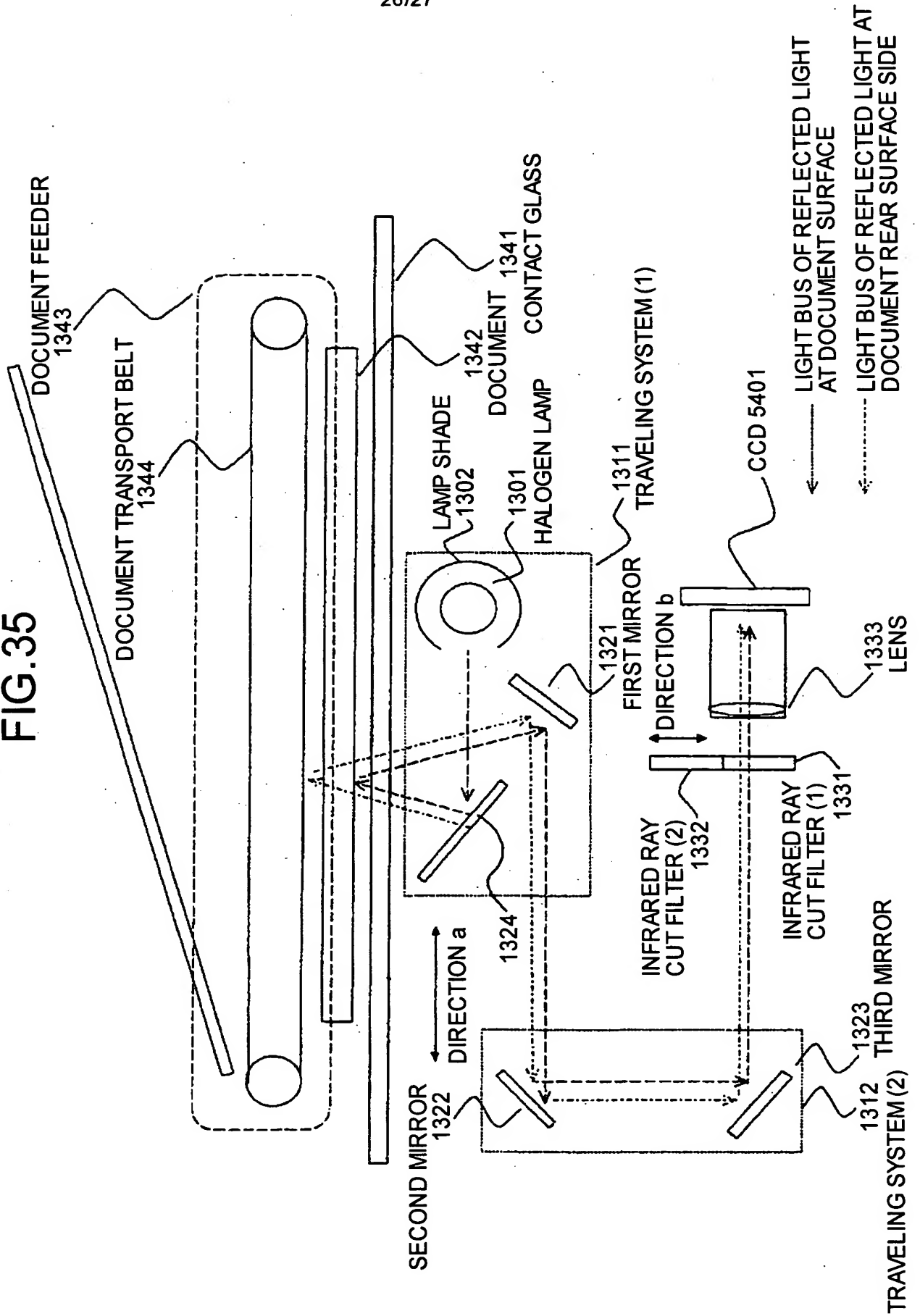


FIG. 34

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FIG. 35



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FIG.36

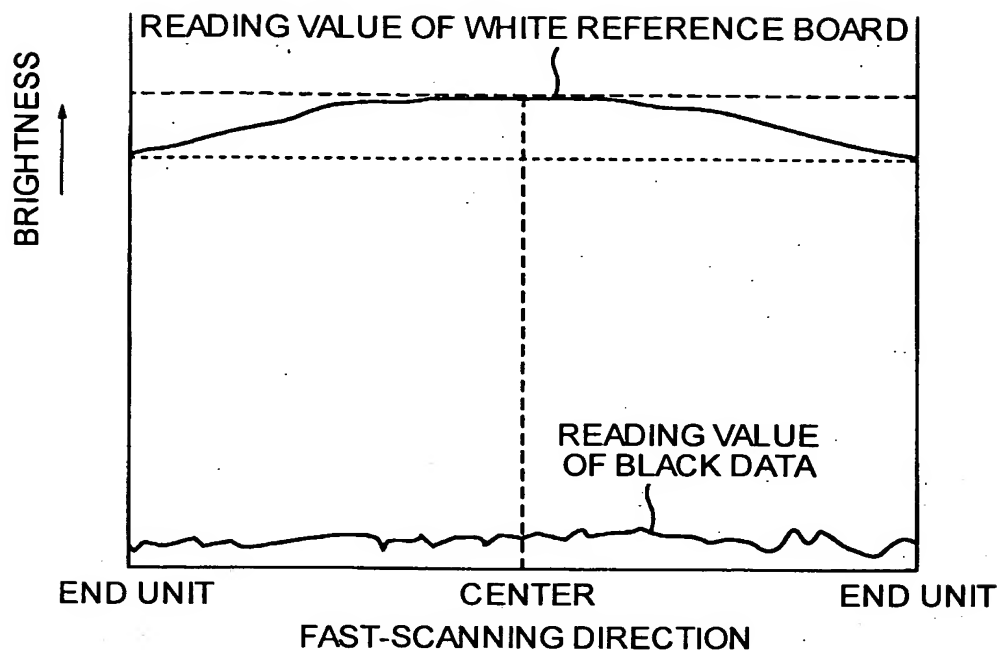


FIG.37

